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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,745	12/14/2001	Essam Sourour	040071-482	8805
42015	7590	06/09/2006	EXAMINER	
POTOMAC PATENT GROUP, PLLC P. O. BOX 270 FREDERICKSBURG, VA 22404			TAYLOR, BARRY W	
			ART UNIT	PAPER NUMBER
			2617	

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/017,745	Applicant(s) SOUROUR ET AL.	
	Examiner Barry W. Taylor	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/22/02, 10/16/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. Figures 1, 2, 3 and 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (see Applicants **BACKGROUND**, pages 1-7 of originally filed specification). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madhow et al (6,175,587 hereinafter Madhow) cited several times in Applicants submitted 1449 disclosures in view of Moshavi et al (6,996,159 hereinafter Moshavi).

Regarding claim 9. Madhow teaches a mobile radio for eliminating multiple-access interference for a user of a CDMA system wherein the orthogonal component of the user's Walsh code is calculated with respect to the plane defined by the codes of the interfering paths.

Madhow does not explicitly show obtaining interfering component to be subtracted out (see difference between Applicants admitted prior art (i.e. figures 1-3 and 7) and Applicants figure 6 (i.e. item 510---interference calculation and subtraction)).

Moshavi not only cites Madhow invention but improves on prior art by using estimations of interference signals to be subtracted out from the RAKE receiver thereby improving on signal detection and power consumption (title, abstract, col. 2 lines 1-21, col. 2 lines 49-67, col. 3 lines 15-47, col. 4 lines 35-67, col. 5 line 8 – col. 6 line 67, col. 7 lines 19-30).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to utilize the teachings of Moshavi into the teachings of Madhow in order to provide an inexpensive mobile communication unit with improved signal detection thereby increasing coverage area of the mobile phone as disclosed by Moshavi (col. 2 lines 1-21).

Regarding claim 10. Madhow does not show obtaining a phase difference between the first and second path to determine an interference component.

Moshavi not only cites Madhow invention but improves on prior art by using estimations of interference signals to be subtracted out from the RAKE receiver thereby improving on signal detection and power consumption (title, abstract, col. 2 lines 1-21, col. 2 lines 49-67, col. 3 lines 15-47, col. 4 lines 35-67, col. 5 line 8 – col. 6 line 67, col. 7 lines 19-30).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to utilize the teachings of Moshavi into the teachings of Madhow in order to provide an inexpensive mobile communication unit with improved signal detection thereby increasing coverage area of the mobile phone as disclosed by Moshavi (col. 2 lines 1-21).

Regarding claim 11. Madhow teaches controller (116 figure 1) capable of evaluating an equation. Moshavi also teaches processor capable of evaluating an equation (title, abstract, col. 2 lines 1-21, col. 2 lines 49-67, col. 3 lines 15-47, col. 4 lines 35-67, col. 5 line 8 – col. 6 line 67, col. 7 lines 19-30).

Regarding claim 12. Madhow does not show combiner (406 figure 4) using interference information.

Moshavi not only cites Madhow invention but improves on prior art by using estimations of interference signals to be subtracted out from the RAKE receiver thereby improving on signal detection and power consumption (title, abstract, col. 2 lines 1-21,

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col. 2 lines 49-67, col. 3 lines 15-47, col. 4 lines 35-67, col. 5 line 8 – col. 6 line 67, col. 7 lines 19-30).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to utilize the teachings of Moshavi into the teachings of Madhow in order to provide an inexpensive mobile communication unit with improved signal detection thereby increasing coverage area of the mobile phone as disclosed by Moshavi (col. 2 lines 1-21).

Regarding claims 5-8. Channel delay estimator claims 5-8 are met by mobile radio terminal having a channel delay estimator recited in claims 9-12.

Method claims 1-4 are rejected for the same reasons as apparatus claims 9-12 since the recited apparatus would perform the claimed method steps.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry W. Taylor, telephone number (571) 272-7509, who is available Monday-Thursday, 6:30am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost, can be reached at (571) 272-7872. The central facsimile phone number for this group is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 2600 receptionist whose telephone number is (571) 272-2600, the 2600 Customer Service telephone number is (571) 272-2600.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the central fax number (571-273-8300).

Barry W. Taylor
Art Unit 2617



BARRY TAYLOR
PRIMARY EXAMINER